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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/762,623

01/22/2004

Steen Pedersen

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EXAMINER

HO, DUC CHI

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

07/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/762,623

Applicant(s)

PEDERSEN ET AL.

Examiner

Duc C. Ho

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1-22-04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11 and 12 is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-10, 13, 14, 16-18 and 21 is/are rejected.
- 7) ☒ Claim(s) 5-7, 15, 19-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-4, 8-10, 13-14, 16-18, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art of the instant application in paragraph [0002-0004], hereinafter referred to as the APA, in view of McManus (US 7,228,358).

Regarding claim 1, the APA discloses a CPE on one side of the DSLAM and a Broadband Remote Access Server (BBRAS) on the other side of the DSLAM. The transmission medium on both side of the DSLAM is based on the ATM standard. When

a customer has a complaint, operators normally execute a loop-back command in the BBRAS for testing the ATM virtual circuit towards the CPE.

The APA, however, does not teach (1) a second transmission medium, i.e., the Ethernet, or Optical, etc., from the DSLAM (the intermediate node) to the second end node, i.e., the BBRAS, and (2) executing a second loop-back between the DSLAM and the second end node according to the second transmission medium.

One skill in the art would recognize the advantage of testing a DSLAM network infrastructure that communicate via more than one transmission medium in order to locate the cause for a customer's complain by executing two different loop-back tests onto the two mediums, i.e., one from the DSLAM to the CPE, and the other from the DSLAM to the BBRAS, so that operators would base on the results of the loop-back tests to identify which link of the two ends actually caused problems.

Therefore, it would have been obvious to include a loop-back test on a second transmission medium on the other side of the DSLAM to the BBRAS in addition to the loop-back test on the ATM transmission medium connecting to the side of the CPE so that operators would base on the results of the loop-back tests to identify which link of the two ends had actually caused problems when customers called to complain.

Regarding claim 2, the APA discloses the step of executing a loop-back test on the side having ATM transmission medium.

Regarding claim 3, the APA discloses the first end node being a Customer Premises Equipment (CPE), and the step of executing a loop-back test inherently includes sending an Operation And Maintenance (OAM) loop-back test signal from the DSLAM to the CPE.

Regarding claim 4, the step of executing a loop-back test should include receiving the Operation And Maintenance (OAM) loop-back test signal in the DSLAM when looped back by the CPE.

Regarding claim 8, the DSLAM network infrastructure of the APA should include a network management node for performing test and maintenance, and this management node should also function to receive the reported results of the loop-back tests from the DSLAM.

Regarding claim 9, the DSLAM network infrastructure of the APA should include the steps in which a center receiving customer complaint regarding the communications link between the end nodes; a step for instructing the DSLAM to perform the loop-back tests on both links, and reporting the results to the DSLAM.

Regarding claim 10, in the DSALM network infrastructure of the APA the customer complaint should be received on a per service basis from one of a plurality of service providers.

Regarding claim 13, this claim has similar limitations as claim 1. Therefore, it is rejected under the APA for the same reasons set forth in the rejection of claim 1. The DSLAM should include means for sending loop-back tests for both communications links, and each of the end nodes should include means for sending a response to the DSLAM upon successfully receiving the second loop-back test message.

Regarding claim 14, the APA discloses the first end node being a CPI, the second end node being a BBRAS, and the intermediate node being a DSLAM.

Regarding claim 16, this claim has similar limitations as claim 9. Therefore, it is rejected under the APA for the same reasons set forth in the rejection of claim 9.

Regarding claim 17, in the DSLAM network infrastructure the network management node should also function as a place to receive customer complaint.

Regarding claims 18, and 21, these claims have similar limitations as claims 13, and 9, respectively. Therefore, they are rejected under the APA for the same reasons set forth in the rejection of claims 18, and 21.

Allowable subject matter

4. Claims 11-12 are allowed.
5. Claims 5-7, 15, and 19-20 are objected to as being independent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Abiven et al.(US 5,043,976) ; Wong et al.(US 2006/0020449) ; McManus (US 7,228,358) are cited to show link testing in an Ethernet DSL network, which is considered pertinent to the claimed invention.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Ho whose telephone number is (571) 272-3147. The examiner can normally be reached on Monday through Thursday from 7:30 am to 6:00 pm.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel, can be reached on (571) 272-2988.

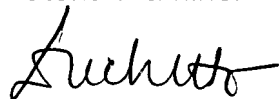
Art Unit: 2616

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

A handwritten signature in black ink, appearing to read 'Duc Ho', written over the printed name.

Duc Ho

06-29-07